

Application No. 09/932,687

Reply to Decision on Petition dated November 12, 2003

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A microfluidic device, comprising:
a well plate comprising a plate and an array of wells formed on or in the plate; and
a microfluidic structure adapted for contact with the well plate and adapted to provide parallel flow of plural fluids in at least one channel, comprising at least one microfluidic circuit, with each circuit having at least one port hole which is in fluid communication with at least one well of the well plate.
2. (Previously Presented) The device of claim 1, wherein the microfluidic circuit is an H-Filter.
3. (Original) The device of claim 2, wherein the H-Filter includes at least two inlets and a microfluidic channel connected to the inlets.
4. (Original) The device of claim 3, wherein a first inlet is connected to a first well, and a second inlet is connected to a second well.
5. (Original) The device of claim 4, wherein the first inlet is configured to provide a first fluid from the first well to the microfluidic channel, and the second inlet is configured to provide a second fluid to the microfluidic channel in parallel with the first fluid.
6. (Original) The device of claim 2, wherein the H-Filter includes a microfluidic channel and at least two outlets connected to the channel.

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7. (Original) The device of claim 6, wherein a first outlet is connected to a first well, and a second outlet is connected to a second well.

8. (Original) The device of claim 7, wherein the first outlet and the second outlet are configured to receive a portion of one or more fluids flowing from the microfluidic channel.

9. (Original) The device of claim 2, wherein the H-Filter includes at least one inlet, a microfluidic channel connected to the inlet, and at least one outlet connected to the channel.

10. (Original) The device of claim 9, wherein the at least one inlet is connected to a first well, and the at least one outlet is connected to a second well.

11. (Previously Presented) The device of claim 1, wherein one of the wells connected by the microfluidic circuit has a bottom that is higher than the at least one other well.

12. (Original) The device of claim 1, wherein a pattern of the array of wells conforms to one of a 12-, 24-, 48-, 96-, 192-, 384-, or 1536-well plate format.

13. (Previously Presented) The device of claim 1, wherein the microfluidic circuit connects at least four of the wells.

14. (Previously Presented) The device of claim 1, further comprising two or more microfluidic circuits, each microfluidic circuit connecting at least two of the wells.

15-26. (Cancelled)

27. (Original) A system for performing a microfluidic process, comprising:

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a well plate comprising an array of wells formed on or in the first plate;
and

a microfluidic card comprising an array of microfluidic circuits, each circuit having at least one port hole, the card being sized and adapted for contact with the well plate such that the at least one port hole of each circuit is connected to at least one well.

28. (Original) The system of claim 27, wherein each well has a volume that is partially defined by a bottom.

29. (Original) The system of claim 28, wherein at least one well in the array has a larger volume than at least one other well.

30. (Original) The system of claim 28, wherein at least one well in the array has a lower bottom than at least one other well.

31. (Original) The system of claim 28, wherein the at least one port hole of each microfluidic circuit is connected to the bottom of a well.

32-38. (Cancelled)

39. (Previously Presented) A microfluidic device, comprising:
a well plate comprising a plate and an array of wells formed on or in the plate; and
a microfluidic structure connecting at least two of the wells,
wherein one of the wells connected by the microfluidic structure has a bottom that is higher than at least one other well.